



Development of E-learning Packages in the Blackboard Learning System

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**International Workshop Sharing Good Practices: E-learning
in Surveying, Geo-information Science and Land
Administration**

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Importance of the syllabus



- A good syllabus template is a key factor for the success of any e-Learning course (see one example: http://edugi.uni-muenster.de/eduGI/downloads/08/teaching_materials_UWH_data_acquisition_and_integration.zip)

edugi() e-Learning Courses

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Eight European GI institutes use existing courses and adapt them to the requirements of the e-Learning course exchange. Each partner coordinates one course, to be taught on a non-profit exchange basis with the partners.

List of Institutions and Courses

Course	Providing University	Links
Visualisation	ITC International Institute for Geo-Information Science and Earth Observation, Enschede, The Netherlands	Syllabus Teaching materials
Geographic Data Bases (Advanced)	HUA Harokopio University Athens, Greece	Syllabus Teaching materials
GeoSpatial Data Mining	ISEGI Universidade Nova de Lisboa, Instituto Superior de Estatística e Gestão de Informação, Lisboa, Portugal	Syllabus Teaching materials
Project Management	IFGI University of Münster, Institute for Geoinformatic, Münster, Germany	Syllabus Teaching materials
GI Standards	UNI BW BW University Munich, Munich, Germany	Syllabus Teaching materials
Virtual excursions in Earth Sciences	IUU Uppsala University, Department Earth Sciences Uppsala, Sweden	Syllabus Teaching materials
Data Quality	TU Department Geoinformation and Cartography, Technical University of Vienna, Austria	Syllabus Teaching materials
Data Acquisition and Integration	UWH University of West Hungary, College of Geoinformatics	Syllabus Teaching materials



Course content



Here we can meet the following tasks:

- **Adaptation to other language**
- **Conversion of plain texts into ppt presentations.**
- **Development of demo software for carrying out the practical tasks through Internet**
- **For self assessment we need to work out tasks, assignments.**
- **We need to plan the synchronous sessions and for this we have to prepare special interactive aids (e.g. video, interactive software, usage tutorial, etc.)**



Structure and content

- The course is organized in modules.
- The platform allows the storage of different types of materials including full courses and other less formal teaching materials.
- A complete course in the platform can integrate the following items:
 - explanatory text;
 - main text;
 - exercises;
 - data;
 - questions for auto evaluation;
 - project description;
 - final exam, other materials including images and video;
 - students' discussion forum.
- For each module there are three on-line synchronous sessions where students can interact with tutors and have access to demonstrations, summaries and web links.

The screenshot shows a course management interface. On the left is a dark green sidebar menu with the following items: Announcements, Staff Information, Syllabus, Course Documents, Assignments, Communication, Discussion Board, External Links, Tools, Control Panel, Refresh, and Detail View. The main content area is titled 'DATA ACQUISITION AND INTEGRATION > COURSE DOCUMENTS' and features a 'Course Documents' section with a book icon. Below this, there are several document entries, each with a folder icon and a title: 'Content' (Syllabus, List of Modules, List of Tutors), 'Part 1 - Introduction' (Introduction), 'First Session' (Live Classroom), 'Part 2 - Data Acquisition methods' (Data Acquisition Methods), 'Part 3 - GIS in data integration' (Part 3: GIS in data integration), and 'Second session' (Live Classroom).



Important tools

- Communication with the students (e-mail, voice-mail, announcements)
- Discussion board
- Tools for synchronous sessions
- At the course delivery: tools for handling of different file formats like html, ppt, pdf, doc, mp3, etc.
- The assessment facilities like test manager, upload of tasks.
- Course calendar
- Gradebook, course statistics

EDUGI004: Data Acquisition and Integration - Tamas Jancso (Docente)			
Content Areas		User Management	
Syllabus	Assignments	List / Modify Users	Remove Users from Course
Course Documents	External Links	Batch Create Users	Manage Groups
Course Tools		Enroll User	
Announcements	Glossary Manager	Assessment	
Course Calendar	Messages	Test Manager	Gradebook
Staff Information	Content Collection	Survey Manager	Gradebook Views
Tasks	Course Portfolios	Pool Manager	Performance Dashboard
Send Email	Check Collection Links	Course Statistics	
Discussion Board	Copy Files to Collection	Help	
Collaboration	Voice Announcements	Support	Contact System Administrator
Digital Dropbox	MyDropBox Suite (Safe Assignments)	Manual	Quick Tutorials



Synchronous session



- The synchronous sessions are the central part of each e-Learning course.
- By our experience this method of teaching needs a lot of time from the tutor to be prepared for it. Not only because of the students can ask any aspect from the material, but also because of it needs a good practice from the tutor not to lose the main stream in the material, since the students usually ask about those issues which are not discussed in detail in the teaching material.
- Especially we should avoid those students who want to test the knowledge of the tutor, since it's boring for other on-line session participants who usually want to concentrate on the assignment issues.





Final exam



- **The final exam of an e-Learning course is a sensitive part, since usually the students should be virtually collected in the same time.**
- **Two options**
 - We can organize the exam in the frame of a synchronous session. The only negative aspect of this type of exam is that some students - who miss this synchronous session - are not able to pass the exam at all. In this case the tutor should consider the possibility to give a chance to take the exam off-line with the help of the local partner tutors of the student's institution.
 - A test session which is open for a limited time (usually 24 hours). In this case each student can find a time window to complete the test. For those who has no time at all in the announced time-frame, the tutor can allow and assign for each student an individual date for the exam.



Business plan aspects (eduGI)



- **1. Design (Organizational framework for project cooperation and virtual mobility, preparation of technical platform, raw-concepts of provided e-Learning courses, to be evaluated and decided on a project meeting).**
- **2. Prototyping and testing (provision of e-Learning courses test versions, execution of courses, evaluation of execution, to be discussed and decided on a project meeting).**
- **3. Implementation of e-Learning courses final versions, based on the test results, and exploitation plan .**
- **4. Dissemination of results by publication of results and digital teaching materials, and execution of eight e-Learning workshops.**

Conclusions

The blackboard E-learning Systems meets all the criteria which are necessary for development and running of effective E-learning courses. Although there are some limitations in the usage:

- 1. It requires to built into the course fee not only the staff cost but also the license fee of the Blackboard system.
- 2. If we want to integrate the material directly into the system we will have trouble with the path names connected to the links.
- 3. The Live Classroom function can be used only with limitations concerning the number of students. We practiced technical problems using audio connection. Practically only the chatting function worked normally. The video conference is not available with this tool.

Announcements
Staff Information
Syllabus
Course Documents
Assignments
Communication
Discussion Board
External Links
Tools

Tools

- 🗨️ Communication
- 🔧 Course Tools
- 🗺️ Course Map
- 🎛️ Control Panel
- 🔄 Refresh
- 🔍 Detail View

Modul name: 6. Remote Sensing
Unit 6. 0.1. Physical Principles
 Author: Malgorzata Veroné Wojtaszek

1. Purpose
 In the unit 1 of modul you learn some of the fundamental concepts required to understand the process that encompasses remote sensing. It covers in some detail the first three components of this process: the energy source, interaction of energy with the atmosphere, and interaction of energy with the surface.

2. Hardware and software requirements
 We don't need any special software.

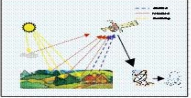
3.Tasks
 We advise you to read the summary using the reference (Modul6_Unit1_principles.pdf) and see there are some examples. The material is also divided into an separate topics, like electromagnetic radiation, electromagnetic spectrum, atmosphere, interaction with atmosphere and target. If there are any section, which is not clear, please, use the Internet educational sources to get more detailed information.

4. Allocated time
 You need approximately 6 hours to review the course material, if the main principles are known. You need 1.5 hours to solve this task.

5. Assessment
 You have finished this Unit if you have basic knowledge of remote sensing elements and you understand the process that encompasses remote sensing. It is very important to see what is the connection between them. There are some [questions](#) to help you decide you are ready to start the next Unit.

Task: Unit 6.01. Physical Principles

What is Remote Sensing?



Remote sensing is the measurement of the acquisition of data about the Earth's surface without contact with it. This is done by sensing and recording reflected or emitted electromagnetic radiation. Remote sensing involves analyzing and applying that information. The process involves the following elements:

- **Energy source** - the first requirement for remote sensing is an energy source which provides electromagnetic energy.
 - **Radiation and the Atmosphere** - as the energy travels from its source to the target, it will come in contact with and interact with the atmosphere it passes through. This interaction may take place a second time (active remote sensing) as the energy travels from the target to the sensor.
- **Interaction with the Target** - once the energy makes its way to the target through the atmosphere, it interacts with the target depending on the properties of both the target and the

The physical elements of remote sensing: energy source, radiation and the atmosphere, interaction with the Target, sensing, analysis and application



THANK YOU FOR YOUR ATTENTION !

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